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09/405,237	09/23/1999	JOHN K. RENWICK	IBN-0014	9267

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EXAMINER	
PHILPOTT, JUSTIN M	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/405,237	RENWICK ET AL.	
	Examiner	Art Unit	
	Justin M Philpott	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,9,12-15 and 26-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,9,12-15 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 24, 2004 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claim 1 filed June 24, 2004 have been fully considered but they are not persuasive.

Specifically, applicant argues (page 7) that the cited art fails to teach the new language of amended claim 1, reciting, "the logical operation is performed on *either or both* of a protocol field and an address field in the packet of data" (emphasis added). However, as discussed in the previous office action, and repeated herein, the primary reference, Rekhter, clearly teaches a logical operation is performed on a protocol field in the packet of data (see page 2, column 2, lines 16-17 and page 5, column 1, lines 38-46 and column 2, lines 1-43. Note that it is well known in ATM to modify the VPI/VCI fields in ATM cell headers as they are passed from switch to switch), and the claim as presently written only requires performance on one field in view of the phrase "either or". Still further, if applicant were to further amend the claim to instead recite "~~either or~~ both", both Semeria (cited in the previous office action) and Farinacci

(new reference introduced in this office action) clearly teach performance on an address field (see Semeria, page 4, lines 21-26; see also Farinacci, pages 1975-1976, section "A. Destination-Based Routing"), and thus, the combined teachings of Rekhter and Semeria, as well as the combined teachings of Rekhter and Farinacci, teach performance on both a protocol and an address field in the packet of data. Even further, applicant admits that performing a logical operation on either or both of a protocol field and an address field is well known in the art (e.g., see applicant's specification, page 2, lines 9-26), and thus, such a limitation would be obvious to one of ordinary skill in the art since applicant admits that it is well known in the art to implement such an operation. Accordingly, applicant's argument is not persuasive.

3. Applicant's arguments (pages 8-10) with respect to claims 12 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter et al. ("Tag Switching Architecture", Cisco, 1996) in view of Davie et al. ("Explicit Route Support in MPLS", IETF, November 1997), further in view of Farinacci et al. ("Tag Switching Architecture Overview", IEEE, December 1997).

Regarding claim 1, Rekhter discloses a method of forwarding data over a network from a source node to a destination node, comprising: providing a subnetwork (domain, see page 4, column 1, lines 30-31) within the network having a label-switched network (see page 1, column 2, lines 19-22) and a plurality of subnetwork nodes (switches, see page 2, column 1, lines 14-16) connected by a plurality of subnetwork links (see page 5, column 1, lines 22-24), the subnetwork nodes including an ingress node (see page 4, column 2, lines 13- 16) and an egress node (see page 4, column 2, lines 16-21) coupled to the source node and the destination node, respectively, at least one pair of subnetwork nodes being connected by a plurality of subnetwork links, the plurality of subnetwork nodes and the plurality of subnetwork links defining a plurality of subnetwork paths (routes, see page 2, column 2, lines 29-30) between the ingress node and the egress node; and associating each packet of data to be transferred from a particular source node to a particular destination node with one of the plurality of paths between the ingress node and the egress node (see page 2, lines 13-32); and performing a logical operation on information carried in each packet of data; wherein the logical operation is performed on a protocol field in the packet of data (see page 2, column 2, lines 16-17 and page 5, column 1, lines 38-46 and column 2, lines 1-43. Note that it is well known in ATM to modify the VPI/VCI fields in ATM cell headers as they are passed from switch to switch).

Although Rekhter teaches the use of explicit routes in multiple protocol label switching (MPLS), Rekhter may not specifically disclose the details of how explicit routes in MPLS work.

However, Davie clearly teaches explicit route support in MPLS in the article "Explicit Route Support in MPLS". Specifically, Davie teaches forwarding a signal (RSVP path message, see page 3, lines 24-25) from the ingress node (first node, see page 3, lines 18-20) to the egress

node (last node, see page 3, lines 18-20) along a route through a subset of subnetwork nodes (the subset of subnetwork nodes is made up of the nodes of the ER-LSP, see page 3, lines 32-36) between the ingress node and the egress node, said signal requesting a response from each node along the route (see page 3, lines 33-34); and receiving response signals from the nodes along the route (the response signals are contained within the RESV message, see page 3, lines 37-40 and page 4, lines 1-6), the response signals defining a path within the route between the ingress node and the egress node as being how explicit routing works in a tag switching (MPLS) network. The teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Rekhter in view of Davie, however, may not specifically disclose the creation of multiple paths between the ingress node and the egress node.

Farinacci, like Rekhter, teaches tag switching architecture and further, teaches creating multiple paths between the ingress and the egress node (e.g., see page 1976, col. 2, lines 18-58). Farinacci also teaches logical operation is performed on an address field in the packet of data (e.g., see pages 1975-1976, section "A. Destination-Based Routing"). The teachings of Farinacci provide improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications (e.g., see page 1982, cols. 1-2, section "VIII. Summary"). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the tag switching architecture teachings of Farinacci to the tag switching architecture of Rekhter in view of Davie in order to provide improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications.

Regarding claim 3, Rekhter teaches that the network comprises nodes (switches) which forward data using Internet protocol node addresses (see page 1, column 2, lines 4-9 and page 3, column 1, lines 8-12).

Regarding claim 4, Davie teaches that each subnetwork node along the route allocates a plurality of labels for the plurality of paths along the route (see page 3, lines 39-40 and page 4, lines 1-2. Note that each path has its own label. Therefore, a plurality of paths inherently includes a plurality of labels). As discussed above, the teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of

ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

6. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter in view of Davie, further in view of Farinacci.

Regarding claim 12, as discussed above regarding claim 1, Rekhter discloses a method of forwarding data over a network from a source node to a destination node, comprising: providing a subnetwork (domain, see page 4, column 1, lines 30-31) within the network having a label-switched network (see page 1, column 2, lines 19-22) and a plurality of subnetwork nodes (switches, see page 2, column 1, lines 14-16) connected by a plurality of subnetwork links (see page 5, column 1, lines 22-24), the subnetwork nodes including an ingress node (see page 4, column 2, lines 13- 16) and an egress node (see page 4, column 2, lines 16-21) coupled to the source node and the destination node, respectively, at least one pair of subnetwork nodes being connected by a plurality of subnetwork links, the plurality of subnetwork nodes and the plurality of subnetwork links defining a plurality of subnetwork paths (routes, see page 2, column 2, lines 29-30) between the ingress node and the egress node.

Although Rekhter teaches the use of explicit routes in multiple protocol label switching (MPLS), Rekhter may not specifically disclose the details of how explicit routes in MPLS work.

However, Davie clearly teaches explicit route support in MPLS in the article "Explicit Route Support in MPLS". Specifically, Davie teaches forwarding a signal (RSVP path message, see page 3, lines 24-25) from the ingress node (first node, see page 3, lines 18-20) to the egress node (last node, see page 3, lines 18-20) along a route through a subset of subnetwork nodes (the subset of subnetwork nodes is made up of the nodes of the ER-LSP, see page 3, lines 32-36) between the ingress node and the egress node, said signal requesting a response from each node along the route (see page 3, lines 33-34); and receiving response signals from the nodes along the route (the response signals are contained within the RESV message, see page 3, lines 37-40 and page 4, lines 1-6), the response signals defining a path within the route between the ingress node and the egress node as being how explicit routing works in a tag switching (MPLS) network. The teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a

well known standard to a system provides the system with significantly improved industrial applicability.

Rekhter in view of Davie, however, may not specifically disclose the creation of multiple paths between the ingress node and the egress node.

Farinacci, like Rekhter, teaches tag switching architecture and further, teaches creating multiple paths between the ingress and the egress node (e.g., see page 1976, col. 2, lines 18-58). Farinacci also teaches logical operation is performed on an address field in the packet of data (e.g., see pages 1975-1976, section "A. Destination-Based Routing"). Further, Farinacci also teaches the response signal includes a label word (e.g., single tag, see page 1976, col. 2, lines 18-58) which defines a grouping of data bits comprising a first and second subset of data bits (e.g., one-to-one mapping, and many-to-one mapping, see page 1976, col. 2, lines 18-23), the first subset of the defined data bits being associated with the route between the ingress node and the egress node (e.g., implicitly for one-to-one mapping) and the second subset of the defined data bits being associated with the plurality of paths within the route (e.g., implicitly for many-to-one mapping), and further characterized in that a subnetwork performing such a method comprises a label-switching network (e.g., see pages 1973-1974, Abstract and section "I. Introduction"). The teachings of Farinacci provide improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications (e.g., see page 1982, cols. 1-2, section "VIII. Summary"). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the tag switching architecture teachings of Farinacci to the tag switching architecture of Rekhter in view of Davie in order to provide

improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications.

Regarding claim 13, Davie teaches that the data bits of the second subset of the defined data bits are not assigned values by the node that generated the response signal; certain bits in each packet could be assigned by any of the nodes along the path of the signal (e.g., see sections "1. Introduction" and "2. Overview of operation"). As discussed above, the teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Regarding claims 14 and 15, while the cited art may not specifically disclose a specific number of n bits or N routes, Examiner takes official notice that it is well known in the art to use a variable number of data bits to determine a variable number of paths, routes, or addresses, and it is also well known that the number of bits required to label N routes is n, wherein $N=2^n$. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to use a

variable number of data bits to determine a variable number of paths, routes, or addresses, and it is also well known that the number of bits required to label N routes is n, wherein $N=2^n$ since such an implementation it well known in the art.

7. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter in view of Davie, further in view of Farinacci.

Regarding claim 26, Rekhter discloses an apparatus for forwarding data over a network from a source node to a destination node, comprising: a subnetwork (domain, see page 4, column 1, lines 30-31) within the network having a label-switched network (see page 1, column 2, lines 19-22) and a plurality of subnetwork nodes (switches, see page 2, column 1, lines 14-16) connected by a plurality of subnetwork links (see page 5, column 1, lines 22-24), the subnetwork nodes including an ingress node (see page 4, column 2, lines 13- 16) and an egress node (see page 4, column 2, lines 16-21) coupled to the source node and the destination node, respectively, at least one pair of subnetwork nodes being connected by a plurality of subnetwork links, the plurality of subnetwork nodes and the plurality of subnetwork links defining a plurality of subnetwork paths (routes, see page 2, column 2, lines 29-30) between the ingress node and the egress node; and associating each packet of data to be transferred from a particular source node to a particular destination node with one of the plurality of paths between the ingress node and the egress node (see page 2, lines 13-32).

Although Rekhter teaches the use of explicit routes in multiple protocol label switching (MPLS), Rekhter may not specifically disclose the details of how explicit routes in MPLS work.

However, Davie clearly teaches explicit route support in MPLS in the article "Explicit Route Support in MPLS". Specifically, Davie teaches a communication system within the subnetwork for (i) forwarding a signal (RSVP path message, see page 3, lines 24-25) from the ingress node (first node, see page 3, lines 18-20) to the egress node (last node, see page 3, lines 18-20) along a route through a subset of subnetwork nodes (the subset of subnetwork nodes is made up of the nodes of the ER-LSP, see page 3, lines 32-36) between the ingress node and the egress node, said signal requesting a response from each node along the route (see page 3, lines 33-34); and (ii) forwarding response signals from the nodes along the route (the response signals are contained within the RESV message, see page 3, lines 37-40 and page 4, lines 1-6), the response signals defining a path within the route between the ingress node and the egress node as being how explicit routing works in a tag switching (MPLS) network. The teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard apparatus for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Rekhter in view of Davie, however, may not specifically disclose the creation of multiple paths between the ingress node and the egress node.

Farinacci, like Rekhter, teaches tag switching architecture and further, teaches creating multiple paths between the ingress and the egress node (e.g., see page 1976, col. 2, lines 18-58). Farinacci also teaches logical operation is performed on an address field in the packet of data (e.g., see pages 1975-1976, section "A. Destination-Based Routing"). Further, Farinacci also teaches the response signal includes a label word (e.g., single tag, see page 1976, col. 2, lines 18-58) which defines a grouping of data bits comprising a first and second subset of data bits (e.g., one-to-one mapping, and many-to-one mapping, see page 1976, col. 2, lines 18-23), the first subset of the defined data bits being associated with the route between the ingress node and the egress node (e.g., implicitly for one-to-one mapping) and the second subset of the defined data bits being associated with the plurality of paths within the route (e.g., implicitly for many-to-one mapping), and further characterized in that a subnetwork performing such a method comprises a label-switching network (e.g., see pages 1973-1974, Abstract and section "I. Introduction"). The teachings of Farinacci provide improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications (e.g., see page 1982, cols. 1-2, section "VIII. Summary"). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the tag switching architecture teachings of Farinacci to the tag switching architecture of Rekhter in view of Davie in order to provide improvements for a tag switching architecture comprising increased scalability and flexibility for a wide variety of routing applications.

Regarding claim 27, Davie teaches that the data bits of the second subset of the

defined data bits are not assigned values by the node that generated the response signal; certain bits in each packet could be assigned by any of the nodes along the path of the signal (e.g., see sections "1. Introduction" and "2. Overview of operation"). As discussed above, the teachings of Davie provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard method for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the explicit route support in MPLS teachings of Davie to the explicit route MPLS teachings of Rekhter in order to provide provide the advantage of implementing explicit routes (which have the advantage of enabling ISPS to have greater control over QOS in the networks, e.g., see Abstract and Introduction on pages 1-3), and further provide a standard apparatus for establishing such routes in an MPLS environment (e.g., see page 2, lines 15-17) wherein it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Regarding claim 28, while the cited art may not specifically disclose a specific number of n bits or N routes, Examiner takes official notice that it is well known in the art to use a variable number of data bits to determine a variable number of paths, routes, or addresses, and it is also well known that the number of bits required to label N routes is n, wherein $N=2^n$. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to use a variable number of data bits to determine a variable number of paths, routes, or addresses, and it is also well known that the number of bits required to label N routes is n, wherein $N=2^n$ since such an implementation it well known in the art.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter in view of Davie further in view of Farinacci as applied to claim 1 above, and further in view of applicant's admitted prior art.

Regarding claim 9, Rekhter in view of Davie in view of Farinacci teach the method of claim 1 as discussed above, however, may not specifically disclose the logical operation comprises a hash function. However, applicant admits that it is well known in the art of MPLS to perform a logical operation which comprises a hash function (e.g., see applicant's specification, page 2, lines 9-26). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to perform the logical operation in the MPLS method of Rekhter in view of Davie in view of Farinacci by utilizing a hash function, since applicant admits that it is well known in the art of MPLS to perform a logical operation which comprises a hash function.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 571.272.3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

ALPUS H. HSU
PRIMARY EXAMINER